A strategic approach to water and sanitation in disasters

Introduction and scope

Disasters are either natural (caused by extreme weather, geophysical phenomena and epidemics) or man-made (as a result of technological disasters or conflict). The number of people affected by natural disasters has tripled since the 1970s. The majority of these disasters occur in developing countries due to their geographical and geological characteristics. Similarly, the incidence of armed conflict or ‘complex emergency’ has increased globally, with widespread disruption exacerbating poverty levels.

Developing country populations are particularly vulnerable to these events, having a high level of exposure and less capacity to cope with the effects. Disaster vulnerability can therefore often be a greater risk than the hazard itself. This vulnerability is equally seen in war situations, which leave people at risk of disease, famine and unsafe living conditions.

An essential component of an emergency response is to ensure access to safe water and adequate sanitation. This note considers the issues surrounding emergency access to water and sanitation, and discusses subsequent approaches to rehabilitation and mitigation.

Key references

- ICRC (2006) Water and Habitat: presentation. www.icrc.org (Figure 2).

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Photographs by Peter Harvey, Jean-François Pinera and Bob Reed

DFID Resource Centre in Water, Sanitation & Environmental Health

For further information, contact:

WELL Water, Engineering and Development Centre (WEDC)

Loughborough University

Leicestershire LE11 3TJ UK

Email: WELL@Lboro.ac.uk
Phone: 0 (44) 1509 228304
Fax: 0 (44) 1509 211079

Website: http://www.Lboro.ac.uk/well/

Headline facts

- The number of disaster victims due to war or natural hazards has risen in the last 30 years to the current high levels, with developing countries being most affected.
- Relief aims to fulfil basic needs, providing minimum levels of well-being and preventing the spread of disease. Water and sanitation are particularly important to this, as lack of access to them can lead rapidly to the spread of communicable diseases.
- Since the early 1990s, the ‘relief system’, involving a multitude of aid agencies, has imposed minimum standard mechanisms and a long-term approach to interventions.
- While there is pressure to respond rapidly to disaster, co-ordination is key to maximizing efficiency. Using local resources and labour, following consultation with the affected community and population, ensures quick and appropriate actions.
- Once an emergency is over, rehabilitation of water and sanitation systems should prevent the degradation of facilities and the return to an emergency situation. Long term sustainability requires agencies to work with water utilities and communities.
- Institutional development, mitigation policies and law reforms can be achieved in the long term; however, relief agencies and funds often focus on the short term, which is at odds with the aim of improved water system rehabilitation.
- A pluralistic approach, perhaps involving community-managed water distribution or privatization, is necessary and uses the skills and experience of all actors.

Facilitating works in Sarajevo and Jaffna

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Creating and enhancing water and sanitation coverage in conflict-affected areas.

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- A pluralistic approach, perhaps involving community-managed water distribution or privatization, is necessary and uses the skills and experience of all actors.
The level of intervention required by water utilities varies. They may take a lead role while needing external support, as was the case in Bam and in Gujarat following the 2001 earthquake. In war situations, water utilities are usually too weakened for this, although they can support international assistance operations. Their role can be vital where security conditions limit intervention by expatriate personnel, such as in Iraq and Chechnya.

Co-ordination of aid agencies

Co-ordination of agencies is essential although difficult, due to competition for funds or media attention, and due to the large number of organizations involved and concerns over neutrality. The aim of co-ordination is to achieve more effective and efficient relief operations, avoiding duplication and ensuring that assistance is of uniform quality. The Sri Lankan experience illustrates the detrimental effects of unco-ordinated responses.

Many international aid agencies and local NGOs participated in the response to the 2004 tsunami. Despite abundant funds, competition for projects and media coverage resulted in agencies competing for beneficiaries, with a price increase for local manpower. The Sri Lankan government set up the ‘Task Force for Rebuilding the Nation’ (TAFRAN) to co-ordinate the reconstruction effort. Field workers found that TAFRAN was largely absent from the field and lacked authority. Consequently, some NGOs worked in fields for which they lacked experience, leading to poor practice such as pour-flush latrines being built without water supply and a general neglect of hygiene promotion activities.

NGOs were in turn criticized for acting independently from local authority and creating inequitable aid distributions. A survey by the Fritz Institute showed that only 30% of NGOs carried out needs assessments, resulting in a mismatch between supply and demand. A lack of warehousing facilities and inadequate transport resulted in 40% of families not receiving timely assistance.

Co-ordination for water supply and sanitation is imperative because of the technical complexity of systems. In addition, a co-ordinated approach allows the different organizational assets and expertise to be used efficiently with equal benefit for all.

The importance of consultation

Although accountability in humanitarian action recognizes the need for consultation of beneficiaries and is reflected in the Sphere standards, those referring to ratios and numbers of facilities are more likely to be implemented than the need for consultation. Cultural factors and the needs of vulnerable groups should influence the design, numbers and location of water and sanitation systems.

Any design shortcomings are amplified for those living in relief camps, so consultation is particularly important. Residents’ priorities may vary between different groups and it is important that their representatives are invited to discuss these and be involved in any decisions made.

Finally, conditions of use and basic maintenance of shared facilities have to be managed by users in most cases. This covers access to water points, cleaning of toilets and drains and the organization of refuse collection. Consultation with communities is required before the systems are built, in order to ensure that they are used in a sustainable fashion.

Approaches to Rehabilitation & Mitigation

It is important to consider sustainability and coverage when designing rehabilitation projects. Technical sustainability requires technology to be appropriate for the local environment and easily sourced. A holistic approach should also be taken to ensure that the work is co-ordinated between different parts of the same network and between other urban services such as power supply etc.

Sustainability is also linked to the overall capacity of water utilities to run systems and covers issues such as operation and maintenance, managerial capability and cost recovery. Finally, community empowerment ensures that accountability mechanisms operate between utilities and customers.
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BRIEFING NOTE 26

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